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Infectious Diarrhoea of Dairy Cows

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INTRODUCTION

An acute, usually non-fatal type of diarrhoea, rapidly spreading throughout adult cattle in the herd affected, has been known in parts of southern England for a number of years (Beckett, 1948).* During the past winter, however, the Veterinary Investigation Officer has been called upon to investigate a number of such outbreaks, following which several interesting points have been brought out. Not the least of these has been the large number of animals that to the knowledge of veterinarians have been affected; and there is every reason to believe that a large number of affected animals are not seen by veterinary practitioners. Since lactating cows are usually affected, with a consequent loss of from 30 to 60 per cent. of the milk yield for two to four days, the total loss of milk is quite considerable.

The purpose of this communication is to bring the condition to the notice of those practitioners who may not already have encountered it, to explain cases already investigated, and to summarise the results of a questionnaire circulated among veterinary practitioners in the Reading Advisory Province. The striking resemblance of this condition to vibrionic enteritis, described by Jones & Little, is discussed later.

INCIDENCE

Twenty-five practising veterinarians in various parts of southern England have co-operated in supplying information. Of these, 17 (68 per cent.) experience the condition in their practices.

An analysis of the findings of these 17 practitioners shows that 59 per cent. have known the condition for periods varying from three to 20 years. Eighty-four per cent. agree that the condition is most commonly seen in the months of November to March, although it occasionally occurs in spring and late summer.

Calves are very rarely affected; this is the experience of 94 per cent. of the practitioners concerned.

In some areas the condition appears to be spreading and has been more common this year than on previous occasions. In some other areas where it was observed a few seasons ago, it has not yet been seen this year. During this winter, at least 41 herds have been affected, in which 760 animals showed diarrhoea and loss of milk.

Investigation

The author has investigated the condition in four herds, comprising about 100 animals, and situated from five to 80 miles apart, the number of animals affected varying from 25 to 80 per cent. Careful enquiry has been made into the feeding conditions in every case, but neither a likely nor a common cause could be found by this means.

Herd No. 1.—Pedigree attested Guernsey herd. Most of the milking herd was folded on kale during the day for about ten days prior to the outbreak, although some milking cows had not received kale. Concentrates consisted of crushed oats, bean meal, Vitamealo pellets, dried grass (10 per cent.) together with a locally mixed mineral mixture with added cod-liver oil. No fresh consignments of food had been used for some time. The hay was of good quality, and no recent changes had been made.

The first cow to show symptoms was one introduced into the milking shed after calving on December 28th. She had previously been housed in a separate loose box prior to and during calving. The condition seemed to spread up and down the shed from this cow, until by January 3rd, 21 of the 26 animals in the byre were or had been affected. At the onset the herd was housed continuously, and hygienic measures, aimed at limiting spread of infection on boots, etc., were introduced. Unfortunately, it was not possible to provide a separate attendant for the animals in loose boxes across the yard, and about eight days after the onset, the condition spread to them.

Herd No. 2.—A non-designated commercial Shorthorn herd situated about five miles from herd 1 and consisting of 13 animals, nine of which had been affected in rapid succession. The animals were at grass during the day. In this herd the origin and spread of infection were less well defined, but contamination of the water supply was a possibility. Food consisted of meadow hay, compound cattle cake (mixed by a different merchant from that used in herd 1). No roots or minerals were fed. No fresh consignments of food had been used immediately before the outbreak.

Herd No. 3.—What appeared to be the same condition in peracute form, occurred in a pedigree attested dairy Shorthorn herd. One animal was seen to be slightly off colour at the afternoon milking. The owner diagnosed a chill and the animal was rugged up in a loose box and given a proprietary drench. This animal was found dead in the box next morning without any other symptom being seen. At this morning milking, a nearby cow was found down, very ill, temperature sub-normal, and scouring profusely. Seven other animals were affected and presented a clinically similar picture to the cases previous encountered. In this herd the affected animals were in different parts of the byre. Food consisted of meadow hay, crushed oats, No. 3 National Cattle Food and mangolds (no tops). No recent change in food had been made. There appeared no possibility of poisoning by either plant (the herd was in a wire fenced field and there was no undergrowth) or mineral. Tissues from the dead animal were examined chemically for the presence of heavy metallic poisons (lead, mercury, arsenic, zinc, antimony and copper), zinc phosphide and phosphorus, with completely negative results.

Herd No. 4.—A small accredited Shorthorn herd consisting of 13 milking cows. In this case, nine animals had been affected, the condition progressing slowly through the herd during two weeks. The last case seen was a recently calved heifer, whose milk yield dropped overnight from three and a quarter gallons to just over one gallon.

The ration consisted of hay *ad lib.*, flaked maize, flaked barley, pollards, a little cocoanut cake, ground nut cake for the first week of the outbreak when this supply ran out, then cottonseed cake was substituted; No. 3 National Cattle Food was also fed in small quantities as well as 4 per cent. dried grass meal. Diced mangolds were fed at the rate of two and a half gallons by volume per cow per day. The changes in the ration again did not seem to influence the diarrhoea.

SYMPTOMS

Sudden severe watery diarrhoea, dark brown in colour, is the predominant symptom. The odour is somewhat foetid, and numerous large soap-like bubbles are seen when the dung has settled. The type of diarrhoea most nearly resembles that found in advanced Johne's disease.

Moderate inappetence is usually present and may appear as the earliest symptom, but more often it is found either with or just after the diarrhoea. Loss of milk yield is most marked, being up to about 60 per cent. When the diarrhoea has commenced, the temperature is either normal or slightly raised. Prior to the onset of the diarrhoea, however, temperatures of 103 to 105° F. have been found. Loss of condition is often negligible. Mucus and on some occasions blood are mixed with the faeces; small amounts of mucus are the more common, but at the time of the temperature reaction, prior to the onset of diarrhoea, mucus may be passed fairly freely (Gould, 1948).*

Milking cows are most frequently affected but bulls and young stock upwards of nine months of age may also show symptoms. In some outbreaks it appeared that cows in rising milk production are more susceptible soon after calving; but further observations on this point are required.

The condition runs a rapid course and the infectivity is most marked. No marked loss of condition is seen, and spontaneous recovery occurs in about 60 per cent. of the cases in from one to four days. Single individual animals may persistently scour for a week or more and then slowly recover. Simple intestinal astringents are efficacious. Occasionally the diarrhoea may persist, and

* Personal communications.

lead to the clinical syndrome of previously latent Johne's disease (Edgson, 1948).*

Post-mortem Findings

Only one animal, a pedigree Shorthorn cow in excellent condition, was the subject of *post-mortem* examination which was carried out within twelve hours of death.

Congestion of both lungs was present, and a few small petechiae were seen on the auriculo-ventricular groove of the heart. The liver was congested and the gall bladder distended, while a few ecchymoses were present on the abdominal surface of the diaphragm. The kidneys were normal. Other lesions were confined to the intestinal tract. The mucosa of all four stomachs was macroscopically normal. The contents of the omasum were more fluid than usual but those of the other three stomachs were normal. Approximately the first nine feet of the duodenum appeared macroscopically normal. From that point onwards, however, there was a diffuse reddening of the mucosa which was most marked about the region of the jejunum, but was present as far as the ileo-caecal valve. There was also slight reddening of the caecal mucosa, but that of the colon was normal. The contents of the inflamed intestine were khaki-coloured with a consistency of thin paint, small streaks of mucus being occasionally seen.

Diagnostic Examinations

Representative samples of faeces were examined from all the herds investigated, for evidence of parasitic infection, including coccidiosis and salmonella infection. In all cases negative results were obtained.

Egg counts were performed by the Stoll technique; the results were either entirely negative or else about 100 e.p.g. Coccidial oocysts were not detected after centrifugation in saturated salt solution.

Bacteriological examination was carried out by (*a*) direct plating of faeces on McConkey agar plates, and (*b*) by inoculation in brilliant green broth and subsequent plating on McConkey agar plates. The results again were negative. Smears were also examined for *M. johnei* with negative results.

Portions of intestinal contents from the fatal case from herd 3 were submitted to the Veterinary Laboratory, Weybridge, but feeding of this material to two cows yielded inconclusive results; this was probably due to the length of time elapsing between death of the animal and feeding of the material.

Diagnosis

The pathognomonic features of this condition are:—

1. Sudden onset of watery, foetid, bubbly diarrhoea.
2. Swift spread amongst adult animals in contact.
3. By the time of investigation, the temperature of an affected animal is often normal.
4. Marked loss of milk yield.
5. Spontaneous recovery with little change in the general condition of the animal.
6. No explanation of the condition by examination of feeding-stuffs.

The absence of a high temperature helps to differentiate the condition from *Salmonella dublin* infection, and in most cases, the herd history will eliminate Johne's disease; while the type of spread and microscopic faecal examination, coupled with the condition of the animals, aid the elimination of parasitic causes. In the early stages of an outbreak the presence of blood in the faeces may cause coccidiosis to be suspected.

Control

The period of incubation appears to be short, and most probably a number of animals are infected by the time symptoms are first seen; immediate isolation of affected animals, however, should be practised. If separate attendants can be provided for different sheds, the spread might be limited, although so far, such methods applied fairly late in an outbreak have not yielded good results. The herd should of course be housed, and fed somewhat drier foods. Only severe cases require astringent treatment.

Discussion

Laboratory examinations of material from these herds along standard lines yielded consistently negative results, while analysis of the feeding schedule also fails to elicit a likely cause of the condition.

The clinical picture of an outbreak is strikingly similar to the condition known in America as winter dysentery, which has been clearly described by Udall (1939). Very few veterinarians in this country appear to have made this observation, and no published account is available, nor is the prevalence of the condition recorded (Udall, 1939). Winter dysentery, as described in the literature, is associated with the presence of a vibrio in the intestine of affected animals.

Vibrios were isolated from the intestinal tracts of calves by Smith & Orcutt in 1917 and 1918, the type isolated proving to be serologically different from *V. foetus*. Jones & Little (1931), described their experiences of infectious diarrhoea in cattle, and in a later paper (Jones, Orcutt & Little, 1931), *Vibrio jejuni* is described as the cause.

The following description is given by Jones & Little: "In general, the more severely affected animals are dull, refuse food, and at times exhibit signs of abdominal pain. The faeces are fluid, in some cases foetid, usually deep brown or greenish-black in colour, and often contain blood and mucus. The milk yield is greatly diminished. The diarrhoea usually runs a short course from a few hours to four to five days, when the faeces become firmer, the general health improves, and the milk yield begins to increase." Of autopsy material, they write: "Examination of material from these (4) cases indicated a catarrhal inflammation of the small intestine (jejunum and ileum) inasmuch as the serosal vessels were injected, the intestinal walls oedematous, and the mucosa swollen, wrinkled and congested. The intestinal content was fluid, usually dark brown in colour, and admixed with mucus."

The authors quoted likewise could not blame the food as the cause of the condition, and they experienced similar difficulty in bacteriological examination. It was pre-eminently the feeding of calves with faeces from cases, and subsequent slaughter, that enabled isolation of the vibrios to be made. Symptoms were seen in calves three days after feeding diarrhoeic faeces.

Udall (1939) states that the condition appears in several herds in the same neighbourhood; and it may spread along a road for several miles. We have encountered several outbreaks in quite small areas rather suggestive of this possibility.

While the incidence of the condition in other parts of the country is not known, it is hoped that reports will soon be forthcoming. Fresh material from such outbreaks will be gladly received at Weybridge or Reading.

Conclusions

There exists in the south of England an acute infectious diarrhoea of dairy cows, the cause of which has not been determined. Routine laboratory examinations have given negative results, feeding errors do not explain the condition, and this negative evidence, coupled with the clinical and epidemiological findings, has prompted a comparison with infectious diarrhoea (winter scour) in cattle, first described by Jones & Little in 1931.

Summary

1. An acute infectious diarrhoea of dairy cattle has been described, and some estimate of the incidence is given. At least 760 animals in 41 herds were affected.

2. A summary of four outbreaks is given, together with *post-mortem* findings. The influence of feeding is discussed.

3. Routine bacteriological and parasitological examinations have failed to yield a causative agent.

4. The similarity to infectious diarrhoea (winter scour) due to *V. jejuni* is discussed.

Acknowledgments.—Thanks are due to Dr. N. S. Barron, Professor T. Dalling and the Department of Bacteriology at Weybridge, for help and encouragement received: to Messrs. L. St. Bel Golledge, N. R. Turnbull and F. R. Spratling for introduction to the herds described: and to the 25 other veterinarians who co-operated in this investigation.

References

Jones, F. S., & Little, R. B. (1931.) The Aetiology of Infectious Diarrhoea (Winter Scours) in Cattle. *J. Exp. med.* **53.** 835.
———, ———. (1931.) Vibrionic enteritis in calves. *Ibid.* 845.
———, Orcutt, M., & Little, R. B. (1931.) Vibrios (N. sp. *V. jejuni*) associated with intestinal disorders of cows and calves. *Ibid.* 853.
———, Little, R. B., & Orcutt, M. (1932.) A continuation of the study of the aetiology of Infectious Diarrhoea (Winter Scours) in Cattle. *J. Amer. vet. med. Ass.* **81.** 610.
Smith, T., & Orcutt, M. (1927.) Vibrios from calves and their serological relationship to *V. foetus*. *J. Exp. med.* **45.** 391.
Topley, W. W. C., Wilson, G. S., & Miles, A. A. (1946.) Principles of bacteriology and immunity. London: Arnold.
Udall, D. H. (1939.) The Practice of Veterinary Medicine. Published by the author. Ithaca. New York.

* Personal communication.

The King has granted to the Zoological Society of Scotland the privilege of prefixing the title "Royal" to its name.

CLINICAL COMMUNICATION

Cases of Fistulous Withers in a Horse and a Donkey in Egypt

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The subjects of the cases of fistulous withers here reported were admitted into the school clinic.

Case No. 1

Subject.—A valuable Arab racehorse, four years old, suffered from a fluctuating swelling over the area of the withers involving both sides. Temperature and appetite were normal. As the swelling was pointing on the off side it was opened and the wound was packed with gauze soaked in a saturated solution of magnesium sulphate, glycerine and trypaflavine. After three weeks a second incision was made on the near side. After two weeks both sides healed up and the case appeared to be terminating successfully. Twenty days later, however, the swelling recommenced. Some material was aspirated for bacteriological examination. Only a haemolytic streptococcus was isolated from the pus. The serum of the horse agglutinated *Br. abortus* completely at a titre of 1:80 and partially at 1:160. The serum was also tested against *Br. melitensis* and gave complete agglutination at 1:40 and partial at 1:80. All attempts made to isolate *Br. abortus* by seeding the pus on appropriate media failed, whether in 10 per cent. CO_2 atmosphere, in ordinary atmosphere, or in a jar containing sodium hydroxide to absorb the CO_2. Since the animal's serum titre against *Br. abortus* was highly indicative of a latent infection with this organism, it was decided to treat this case with dead *Br. abortus* vaccine according to the manner originally advocated by Duff. Five 20 c.c. doses were given intramuscularly at weekly intervals. No surgical interference was attempted. After the fifth injection the swelling subsided and the animal was discharged as completely cured, and has remained cured since the date of return to the owner on July 9th, 1947.

Case No. 2

Subject.—A draft donkey, five years old. A big swelling occupied the whole region of the withers on both sides. Some material was aspirated for bacteriological examination, as well as some blood for the agglutination test. The serum agglutinated *Br. abortus* completely at a titre of 1:20 and partially at 1:40 while it agglutinated *Br. melitensis* at only a titre of 1:10. The donkey was subjected to a course of *Br. abortus* vaccine, in the same manner as the horse, with no effect whatever.

Culture of the pus revealed, unexpectedly, a pure culture of a Salmonella. The serum of the donkey agglutinated that organism completely at a titre of 1:1,280 and partially at 1:2,560, denoting that this Salmonella was responsible for the trouble. This was further confirmed by putting the serum of a normal donkey against the same organism. The agglutination test was negative.

An autogenous vaccine from this Salmonella was prepared and 20 c.c. doses were given intramuscularly at weekly intervals. Five doses were given but without apparent improvement. The swelling was then opened, dead tissues removed and the wound treated surgically.

The Salmonella had the following characteristics: Motile. Lactose and sucrose not fermented. Glucose, maltose and mannite fermented with the production of acid and gas. Litmus milk turned alkaline after three days. Indole and H_2S not produced. Gelatin not liquefied.

From the results of tests made with sera available in Egypt it seemed probable that the organism was *S. abortus equi*, but as the range of sera was incomplete a culture was sent to Dr. Joan Taylor, Central Public Health Laboratory, Colindale, London, who has kindly examined it for us. Her report states: "This organism has the following antigenic structure

O = iv. xii.
H = e n x.

therefore it is *Salm. abortus equi*."

References.

Bennetts, H. W., & Filmer, J. F. (1931.) *Austral. Vet. J.* **7.** 74.
Duff, H. M. M. (1936.) *Vet. Rec.* **16.** 175.
Fitch, C. P., Delez, A. L., & Boyd, W. L. (1930.) *J. Amer. vet. med. Ass.* **29.** 17.
Rinjard, P., & Hilger, A. (1928.) *Bull. Acad. vét. France.* **1.** 272.
Steward, J. S. (1935.) *Vet. Rec.* **15.** 1563.

ABSTRACTS

[**A Study of Equine Fistulous Withers and Poll Evil. A Complex Infection with** *Actinomyces bovis* **and Brucella.** Roderick, L. M., Kimball, Alice, McLeod, W. M., & Frank, E. R. (1948.) *Amer. J. vet. Res.* **9.** 5-10.]

A detailed account of the regional anatomy is given. The position of the supraspinous bursa is variable and commonly extends laterally between the trapezius and rhomboideus. There is a close correlation between the position of the normal and diseased bursae.

The pathology was studied in nine closed cases of fistulous withers and poll evil. It is primarily a bursitis, with the initial serous exudate, followed by the accumulation of fibrin and blood. Chronic inflammation results in a thick connective tissue sac with a red vascular lining. The variation in size and location of the lesions is related to the contour of the bursae. Necrosis of the ligamentum nuchae and dorsal spines indicates an advanced case.

Most cases are rural in occurrence and indicate that horses acquire infection from association with cattle. A high proportion of cases showed a positive agglutination test to *Brucella abortus* and the organism was frequently isolated from closed cases. Of 107 cases, 98 showed agglutination at 1:25, and of 64 normal horses only five were positive.

A smooth strain of *Actinomyces bovis* was isolated from the granulation tissue in the wall of the bursa in 65 of 80 cases.

Individually, *A. bovis*, *Br. abortus*, and *Br. suis* were only mildly invasive. When injected together into the supraspinous bursa of six horses and one mule, a characteristic fistulous withers was produced in four horses and one mule. The lesion was pathologically identical with the condition met with in the field, and the organisms were recoverable.

Treatment with abortion vaccine has not produced any beneficial results. The principles of surgical treatment are discussed in the light of the wide variation of extent and type of lesion encountered.

P. K.

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[**The Etiology of Swine Dysentery.** Doyle, L. P. (1948.) *Amer. J. vet. Res.* **9.** 50-51.]

While swine dysentery can be transmitted by feeding bowel discharge, or portions of the large intestine of infected hogs, the feeding of a strain of *Salmonella cholerae suis* produced a disease which was not identical with swine dysentery.

The author describes the isolation and propagation of a Vibrio from the colon mucosa of an infected hog, which in apparently pure culture and fed in gastric mucin produced swine dysentery in 27 days. The organism was isolated by snipping a piece from the deep layer of mucosa and streaking on blood agar. In 15 per cent. carbon dioxide, at 37·5 C., dewdrop-like colonies appear in 48 hours. It is very like *Vibrio foetus* and the name *Vibrio coli* is suggested.

An account is given of the morphological characters, cultural reactions and pathogenicity for laboratory animals. So far it has not been differentiated from the Vibrio, which is the normal inhabitant of the intestinal tract of hogs. There is no specific treatment and the chief consideration is prevention of spread of the disease.

P. K.

REPORT.

[**Colonial Primary Products Committee: Interim Report,** January, 1948. H.M.S.O. 6d.]

The Colonial Primary Products Committee was set up by the Colonial Office, in May, 1947, to "review commodity by commodity the possibility of increasing Colonial production, having regard on the one hand to the interests of the Colonial Empire and, on the other hand, to the present and prospective world needs and the desirability of increasing foreign exchange resources."

Concerning beef, the Committee mention the dramatic opportunities which—at first sight—appear to exist in the Colonial Empire for establishing a meat export trade on a scale comparable to that of the Southern Dominions or of the Argentine. In the African Colonies, for example, the cattle population is estimated at 25,000,000 head as compared with Australia's 13,000,000 and the Argentine's 34,000,000. The Committee believe that, taking a really long view, the meat industry could be developed, but there are certain difficulties which will have to be overcome.

There is at present no properly organised carcase trade in tropical Africa, while the proposed cannery in Tanganyika has yet to be set up, and the one in Kenya is operating at only about one-third

of capacity due to lack of cattle. Another difficulty as regards the export trade is the presence of rinderpest and other virus diseases. The United Kingdom regulations prohibit the import of fresh or frozen meat from rinderpest areas, since otherwise the virus might be introduced into British herds through the medium of a frozen carcase. Discussions took place between veterinary experts, but no way could be found by which the import of carcase meat from rinderpest areas could be permitted under present circumstances. It was recognised that rinderpest in the African colonies had been greatly reduced by energetic campaigns of mass inoculation, and that as a result the areas south of the Tanganyika central line are now believed to be free of the disease. Neighbouring areas of infection, and the presence of wild game to act as carriers, meant that mass immunisation alone could not remove all risk. "The most that the Colonial veterinary officers could say was that no outbreak in their experience had ever been traced to an immunised animal. They could not produce positive proof that such an outbreak could not occur."

On the research side it is recommended that experiments be started at once to determine "whether or not residual infection may exist in immunised animals." The improvement of the native cattle will have to be undertaken before they are fit for the carcase export trade. To effect this improvement a change will have to be brought about not only in methods of breeding, pasturage, water supplies and management, but also in the social outlook. At present a man's social status is dependent upon the quantity of cattle he owns, not the quality, and to persuade him to sacrifice some of the former for the latter will be a difficult task.

Organised marketing, and the provision of cold storage facilities in the abattoirs and trains to the ports, will also be needed before beef production can be developed.

With regard to pig products, the Committee regard the short-term prospects as good, though in the long run cost and quality might not be able to compete with those obtaining in other parts of the world. Kenya at present produces some 50,000 carcases a year, and it is hoped that swine fever will not remain an obstacle to United Kingdom imports from this and other African territories.

The Committee believe that the dairy industry could be further developed in Kenya and Jamaica, so that fresh and tinned butter and tinned milk could be exported to the United Kingdom. The prospects for poultry and egg exports from the Colonies are less encouraging.

REVIEW

[The UFAW Handbook. The Care and Management of Laboratory Animals. A. N. Worden, M.A., B.SC., M.R.C.V.S., A.R.I.C. pp. 368+ xvi. 70 illustrations. (1947.) London: Baillière, Tindall & Cox.]

This book should undoubtedly be in the possession of all research workers in veterinary, medical and allied biological sciences and should be a standard reference book in all institutes where experimental animals are kept. There is brought together for the first time a mass of information on the care of laboratory animals previously restricted to the knowledge of those institutes where particular methods or animals are in use.

This concise yet practical introduction to the husbandry of laboratory animals will be invaluable to both research workers and technicians.

The various chapters deal with: law and practice regarding the use of experimental animals; the construction and equipment of the animal laboratory, and pests of the animal house and their control. The housing, feeding, breeding, anaesthesia, euthanasia and diseases of the following animals are dealt with in detail: the rabbit, the guinea-pig, the Norway rat, the black rat, the mouse (including the wild mouse, the wood mouse and deer mice), the cotton rat, the field vole, the Orkney vole, the golden hamster, the ferret, the hedgehog, the pigeon, the canary, amphibia and fresh water fish.

The more specialised animals—the monkey, dog, cat, horse, swan, vole, poultry, reptiles and invertebrates—are dealt with in one chapter, mainly by a summary of the literature and reference to certain workers who have volunteered to supply the necessary information.

The appendix, of nearly 100 pages, on the elements of statistical analysis is probably too advanced for the general purpose of the book and assumes a fairly advanced previous knowledge of the subject.

The whole treatise is based on the assumption that "research workers in Britain regard any undeserved pain as an evil but as the less of two evils if a large amount of suffering can be prevented by means of knowledge got by inflicting only a small amount."

Excellently bound and printed on high quality paper, the book is profusely illustrated by exceptionally clear photographs and diagrams of various types of cages and equipment. There is an extensive bibliography to each chapter and both a subject and an author index.

One small criticism or suggestion which might be made is that in view of the increasing use of the chick embryo in experimental work, the egg-borne diseases of poultry and the incubation of fowl eggs might be dealt with in any future editions.

This book undoubtedly will be widely read by scientific workers and considerable credit will be reflected on the veterinary profession by the able manner in which the numerous members of the profession who have collaborated in the work have presented their subjects.

THE NEW ANTIBIOTIC AGENTS

In a review of new antibiotic agents read before the 96th meeting of the American Medical Association, Atlantic City, N.J., Sir Howard Florey (states *The Pharmaceutical Journal*) emphasised that an antibiotic for medicinal use should have the following eight desirable properties:—

(1) *Powerful action.*—It is improbable that many of the weaker ones will find a medicinal use.

(2) *Specificity.*—Some of the antibiotics have remarkable specific action. At one time it seemed that if a substance would act against both gram-negative and gram-positive organisms, it would probably be toxic to animal cells. This view is no longer held.

(3) *But slight toxicity* either by one or frequent doses to the intact animal body and to individual cells such as the leucocytes; nor must it damage the kidneys, if excreted or concentrated by them.

(4) *Activity in the presence of body fluids,* such as serum, pus or cerebrospinal fluid.

(5) *Stability to tissue enzymes.*—The reaction with trypsin will form a guide, for it is unlikely that any substance that reacts with tissue enzymes or with trypsin will survive after injection into the blood stream. It is also desirable, but not essential, that the drug should be absorbed from the gastrointestinal tract, so that it can be given by the mouth.

(6) *General stability.*

(7) *Slow excretion.*—Penicillin fails in this respect, as it is excreted by the tubules and rapidly leaves the body.

(8) *Non-development of resistance* in previously sensitive bacteria. The staphylococcus especially becomes resistant to penicillin *in vitro,* fortunately less so *in vivo.* This induction of resistance is seen in the case of streptomycin and of many other antibiotics.

Reviewing the substances already isolated from the fungi, actinomycetes and bacteria that are likely to be of interest, the only ones obtained from the fungi imperfecti and ascomycetes are penicillin, and helvolic acid or fumigacin, as it is also termed. Helvolic acid has all the desirable characters enumerated above, except that bacteria readily acquire resistance to it. Among the 30,000 basiodiomycetes, several hundreds produce antibiotics, but none of these is of value because of toxicity. From the actinomycetes, streptomycin has been most extensively studied. Another, streptothricin, has an action against susceptible bacteria but it causes late delayed toxic action which prevents its use for man. The third possible one, proactinomycin, is on the borderline of usefulness; if better substances had not been found it would have been further studied.

With bacteria, the most important group that has proved of interest is that composed of the aerobic spore-forming organisms, the large genus bacillus. From these are obtained tyrothrycin and its two components, gramicidin and tyrocidine, which have been tried clinically. Bacitracin and lichenformin are capable of protecting animals infected with streptococcus, pneumococcus, *B. anthracis* and staphylococcus. They will act when given subcutaneously on an infection induced intraperitoneally and are therefore true systemic chemotherapeutic agents. Subtilin cannot be classified as such because, although it gives protection against certain infections, it appears to be necessary to inject it into the peritoneal cavity where the infecting bacteria had been previously placed. It may, however, find a use as a local application, as does tyrothricin. Colistatin and bacillin, of which little is known, except that they affect such organisms as *Esch. coli,* may have good prospects of usefulness. The products from such bacteria as *Ps. pyocyanea* appear to be too toxic for use.

Weekly Wisdom

Half the wrong conclusions at which mankind arrive are reached by the abuse of metaphors, and by mistaking general resemblance or imaginary similarity for real identity.—Lord Palmerston.

Veterinary Affairs in East Africa

A "News-Letter" from Kenya

Dear Mr. Editor,

It is time now that I sent you some more items of news from East Africa that may be of interest to your readers.

As reported in your columns, the post of Director to the East African Veterinary Research Organisation (E.A.V.R.O., formerly the Central Veterinary Research Institute) has been filled and Dr. White arrived here last August to take up his duties. He has tackled a difficult task with exemplary patience and tact, two qualities peculiarly essential in the Colonial service. As a result we are now beginning to see some results of his efforts; new houses are in the course of being built for staff and a new production laboratory is to be started in a short time. The Kenya Veterinary Department and E.A.V.R.O. have divided their functions and although the new organisation is very short staffed and responsible for manufacture of a formidable list of vaccines, a start has been made with the long-term research programme, that will undoubtedly gather momentum as staff are recruited, and achieve in due course really valuable results.

E.A.V.R.O. is still a guest in the laboratories of the Kenya Veterinary Department and I cannot leave this subject without saying that this advance could not have been achieved without the wholehearted assistance and sympathy of the Director of Veterinary Services, Mr. E. Beaumont. The happy relationship which has been established between two organisations working under the same roof augurs well for future collaboration. Dr. Piercy is at present in acting charge of the departmental laboratory.

Mr. Faulkner has joined the Kenya Service, as Deputy Director, Field Services, on transfer from Swaziland. We have been glad to welcome him here and congratulate him on his appointment.

East African Salaries Commission

Both the Kenya Department and E.A.V.R.O. are still desperately short staffed and we live in a situation where the sickness of even one man can turn the whole machinery into chaos. Apart from personal difficulties over poor pay, it is one of the serious features of the delay in fixing the new salaries and terms of appointments that recruitment has been virtually held up for three years. The senior men are very tired from struggling to do the senior jobs and to tackle the jobs of juniors at the same time. A healthy flow of younger men into a service is essential; they contribute freshness and new ideas; at the same time much work which is drudgery to the older men is fresh and exciting to the younger. However, the E.A. Salaries Commission, which arrived in East Africa in March, 1947, is expected to publish its report shortly, and it is devoutly to be hoped that its report will be accepted speedily by the local governments so that a recruiting drive may rectify the staff position and give us some young men to stimulate our ideas.

Makerere College Readership in Veterinary Science

The Kenya Government has just announced a gift of £40,000 to Makerere College for the establishment of a Readership in Veterinary Science. This money represents a part of the profits made by the Government during the war from the operations of the Government-controlled Meat Marketing Board. This is an item of news of great importance and is, we hope, the forerunner of the proper establishment of this school. It is well recognised that African education is perhaps the most important of all functions in the development of these Territories, and no aspect of that education is of greater importance than the veterinary. The greatest source of wealth, certainly in Kenya, lies in the livestock and their proper utilisation for the production of income. At present, native herds are not culled, the stock are largely worthless, protected by veterinary control, multiply on the face of the earth, which becomes bare of grass, impacted by trampling and washed into the sea during the rains at the rate of millions of tons in the year. There is one way, and one way only, in which this process can be overcome and a rational system of stock husbandry introduced: that is by education of the Africans by trained Africans. That is why I say that the announcement of this gift by the Kenya Government is of such great importance.

The school is again at a very low ebb with an insignificant number of students and it is hoped that the new Reader may be able to raise enthusiasm and establish it on a really sound basis. In future, only the last two years of the course are to be taken at Kabete and we have at present no students here. With great thankfulness, I have relinquished the part-time post of Dean of the School which I have held off and on since 1938 and continuously for the past three years.

A Scientific Society

An interesting innovation at Kabete is the formation of a Scientific Society, which meets once a month to hear papers of veterinary and general scientific interest. The Society consists chiefly of the Kabete laboratory staff, but field officers are also welcome to attend and there are usually a number present. Persons from outside the veterinary profession are also invited to attend from time to time and to present papers. Papers read and the ensuing discussions are prepared for circulation to persons interested in the form of a cyclostyled sheet, which we call *The Kabete Bulletin*. The venture has been warmly welcomed and our meetings well attended; I am sending you with this the copies of Bulletins so far published, and we shall be happy for you to use any material you wish for abstraction. We hope that perhaps one day the Bulletin may become an *East African Journal of Veterinary Science*.

The Kenya Veterinary Department's annual staff conference was held early in February and was well attended by members, both professional and otherwise. This was followed by the annual general meeting of the Kenya Veterinary Medical Association and the next day by the meeting of the East African Branch. Unfortunately no delegates were able to attend from Uganda, and the lack of any expression of view from that territory was greatly missed. Tanganyika, however, sent a strong delegation consisting of D. G. White, E. F. Peck and G. Pevie. White and Peck were elected President and Secretary respectively. The new President of the K.V.M.A. is Dr. Piercy, and Dr. Barnett is Secretary. I am to continue as Corresponding Member, so I fear that you, Mr. Editor, will have to tolerate my effusions for yet another year.

A dinner and dance of the Veterinary Medical Association of Eastern Africa was held at Torrs' Hotel, which was a great success.

Before ending this letter, I should like to add that certain members have written to me during the past year, enquiring as to the prospects of employment in Kenya. A short pamphlet has now been prepared by the East African Branch, which has been sent to the N.V.M.A.; it may later be published. However, the parent association is now in a position to advise members on the prospects and type of life in this country. We want far more men here, but we want to ensure that only the right type of man will be recruited, that is the type of man who will take advantage of what the country and the life has to offer and will not be disheartened by the disadvantages. We are confident that service conditions will shortly have been adjusted and that the service will offer great scope and good prospects.

On behalf of members of the K.V.M.A., I send our best wishes to members at home, with the especial hope that this year may bring somewhat more comfortable living to all our friends and relations in the United Kingdom.

Yours sincerely,

Kenya Veterinary Medical Association,
c/o Veterinary Research Laboratory,
Kabete,
Kenya Colony.

R. N. Fiennes,
Corresponding Member.

March 8th, 1948.

A Note on Compton

"Compton field station of the Agricultural Research Council has famous herds of pedigree Ayrshires and Large Whites, observes the *Farmers' Weekly* in its current issue and continues: "Less well known are its other animal breeding activities which include the annual production for laboratory work of 25,000 guinea-pigs and 100,000 mice.

"At the station they have succeeded in something which is the dream of every cattle breeder—the production of animals as alike as peas from generation to generation. Unfortunately, these animals are not cattle, but rats.

"In a talk to Kent dairy farmers last week, Dr. W. S. Gordon, director of the station, described how in-breeding (brother to sister) for 40 generations had produced a rat which was not only exactly like its fellows, but which reacted in precisely the same way. Cattle breeders still have some way to go before they can do that."

Quarterly Meeting of Council, N.V.M.A.

Summary of Proceedings

The Association and the Veterinary Surgeons Bill, 1948

Uppermost in the minds of the large body of members of Council attending the quarterly gathering held at the Connaught Rooms, Kingsway, on Friday, April 9th, 1948, was the Veterinary Surgeons Bill, now under consideration by the House of Lords. Copies of the draft Bill, together with memoranda thereon by the Registrar of the Royal College have been issued to the profession—to members, N.V.M.A. through the medium of this journal.

The President, Mr. L. Guy Anderson, in the course of a statement on the Bill introducing a preliminary discussion (preparatory to the special Meeting of Council held yesterday) said that he found himself in a somewhat unusual position, inasmuch as the Minister decided that the terms of the Bill and the discussions leading to it should be regarded as confidential. Through the good offices of the Registrar, R.C.V.S., however, the Ministry were persuaded to give a good deal of information confidentially to the officers of the Association, and they discussed it with the Officers of the Royal College. Therefore, the Association's officers had some pre-knowledge of the Bill which hitherto they were bound in confidence not to discuss with anybody.

The Bill was a fairly comprehensive one. Parts of it affected the Royal College more particularly; others affected the Association very materially. He thought that Council would agree that, on the whole, it was a very desirable Bill, but there were some sections of it which were somewhat unpalatable to them. There was plenty of time to table amendments to the Bill and to make up their minds what they were going to do about it. The Second Reading in the Lords had been postponed until April 20th. He must warn them that if there was to be a great deal of discussion in the House, its passing probably would be postponed this session and possibly for two or three years. However, many of its clauses were the result of discussion and negotiation: many were, in effect, compromises. It should, therefore, be pointed out that if they, from the veterinary side, tried to amend the Bill, it was possible that other people would endeavour to do the same in other directions. They must make up their minds whether or not they wished to take the chance of that.

Unity Essential

He wished most emphatically to stress that whatever action was taken in relation to the Bill must be the united action of the whole profession (applause). If they had the Royal College pulling one way, the N.V.M.A. another and various bodies and individuals yet another, the end result would be chaos: he was quite sure Council would agree with him there. The Royal College, through its President, had made it clear that they wanted to keep in closest touch with the Association in this matter and that they wished to collaborate, so that whatever action eventually was taken would be the combined action of the veterinary profession. Partially representative, and more particularly individual, action could and would raise great difficulties—indeed it might be disastrous; thus he would urge them freely to discuss their individual views in Council.

The Royal College had held a special meeting the previous day and were meeting again in a week's time. They (the N.V.M.A. Council) could have a preliminary discussion that day and call a special meeting in the near future; thus the Bill could be more fully discussed in the light of the decisions reached by the Governing Body of the profession.

Briefly reviewing the terms of the Bill, the President made the following points:

1. The Council of the Royal College was given powers which protected the profession from the consequences of the loss of the one-portal system.
2. The terms upon which unqualified persons might be admitted to the Second Register were laid down fairly clearly.
3. The Organising Committee of the N.V.M.A., as the result of careful investigation, had produced figures which enabled him safely to say that not more than 400 people were eligible for entry on the Supplementary Register—and not all of these would be put on that Register. With such a total, which was much below the figures which had previously gained currency, the suggestion of a Supplementary Register became far more palatable.
4. The title to be given these people was, at the moment, that of "Veterinary Practitioner." That was something no member of the profession liked (hear, hear). The Royal College had never given way on that point: the decision to use that title was a Ministerial one.
5. In regard to the animal welfare societies, here again was a section which most of them felt was somewhat unpalatable. Where a society was collecting money from the public for its purely charitable work, employees might be granted a licence to do limited practice. He (the President) did not like that at all. But there were certain safeguards: it should be pointed out that the licence was granted to the individual only while in the employment of the society; that the individual was only allowed to do limited work and that such licences would only be granted by the Minister where there were insufficient veterinary surgeons to man the animal welfare clinics. That was frankly a compromise. Certain animal welfare societies wished to be left out of the Bill entirely, and were such a thing to happen, the whole purpose of the measure would be lost and tremendous harm done. The compromise represented certain advantages, inasmuch as societies accepting these terms must accept the principle that all clinical work must be done by a veterinary surgeon if possible.

In regard to the constitution of the Governing Body (proceeded the President) here again the Royal College had fought for the profession very successfully, with the result that of the two representatives of each university, at least one must be a veterinary surgeon, and the great majority were elected members. There was a possibility that a President of the Royal College might not be a member of the profession, but the possibility was so remote that they might or might not regard it as an important matter.

The disciplinary powers accruing to the Royal College were very strong. Then there was a section relating to power to give effect to an agreement between the United Kingdom and Eire, and in a Miscellaneous and General Section various points which were largely self-explanatory were dealt with. Two schedules terminated the Bill.

The President then intimated that a note had been received from the Registrar, conveying information following upon consideration of the Bill by the Royal College at its Special Meeting held the previous day.

On Clause 5 (Restriction of Practice of Veterinary Surgery by Unqualified Persons), giving the Minister power to make an order to specify any minor treatment, test or minor operation as being outside the restriction, the Royal College were going to ask the Minister to insert the word "minor" before "test" also. The Association certainly would support the Royal College in this matter.

On Schedule I (Treatment and Operations which may be Given or Carried out by Unqualified Persons), enquiry was to be made of the Minister if in the case of a mature animal, the operation of castration shall be done by a qualified man. Here again the support of the Association would be forthcoming.

In regard to the proposed title to be conferred on those whose names would appear in the Supplementary Register, the Royal College passed a Resolution to the effect that they could not accept the suggestion that such a person should be called a "Veterinary Practitioner."

In the preliminary discussion which followed the President's statement (and which will be reported in our next Supplement) it was intimated that the Royal College favoured the adoption of the recommendation of the Chancellor Committee that those on the Supplementary Veterinary Register should have conferred upon them the title "Registered Animal Practitioner."

The President announced that the Registrar, R.C.V.S. was prepared to visit meetings of veterinary surgeons called for the

purpose of discussing the Bill. The necessity for expeditious procedure was urged by several members of Council, N.V.M.A. The Bill was already on its way through Parliament and there was not much time. The President, on this point, said that he had not meant to imply that they could be leisurely in their deliberations, but that they should not necessarily act that day. He felt that their preliminary discussion would provide a useful background for their later and fuller deliberations.

Before postponement of the discussion to the adjourned meeting of Council, N.M.V.A. to be held on Friday, April 23rd, additional points made included a warning that delay in the passing of the Bill would involve a rapid increase in the number of persons eligible for the Supplementary Register, and an assertion that the status of unqualified practitioners would be increased by the conferment upon them of any title embodying the word "veterinary": to acquiesce on this would render the profession accessory to the delusion of the public and would adversely affect the student entry.

The Cattle Diseases Control Scheme

Briefly to record the major items of additional business, many members of Council were concerned at the decision of the Veterinary State Medicine Committee to recommend the closure (by cessation of entry into new undertakings) of the Scheme for the Control of Certain Diseases of Dairy Cattle, while encouraging individual veterinary surgeons to carry on any disease control measure arranged on a private basis. To do so, they contended, would be to throw away the opportunities created by excellent groundwork which the scheme had to its credit.

The President replied that no member of the Committee would question the tremendous value of the operation of the scheme, but it was felt that it had largely served its educational purpose. It was not, in fact, envisaged that the whole scheme should be dropped otherwise than officially. The National Farmers' Union had made it perfectly clear that they would not accept a scheme of any sort which did not include therapeutic measures, but the Committee did not think it possible, under existing circumstances, to initiate an alternative scheme including such measures.

Eventually it was decided that consultations be continued with the N.F.U. and the Ministry, it being felt firstly, that any decision as to continuance or closure should be made jointly by all parties to the scheme and, secondly, that the door should not be shut by the Association on the discussion of any possible new scheme that might be suggested.

Royal College Rulings

The report of the Organising Committee recorded the following rulings of the R.C.V.S. Council, of special interest to those concerned with animal welfare society clinics:

1. The Council disapproves of the use of the word "Veterinary" as a part of the title of the R.S.P.C.A. clinics, pending the outcome of the proposed veterinary legislation.
2. The Council are of the opinion that the practice in certain districts of exhibiting the names of attending veterinary surgeons at R.S.P.C.A. clinics is in order from an ethical point of view, provided that all the veterinary surgeons in the district have been invited to participate in the scheme under which the clinic is operated.
3. The Council disapproves of a member of the profession, employed in a full-time capacity by an animal welfare society, being permitted to carry on any private practice on his own account.

The Council, R.C.V.S. is not prepared to give a general ruling as to whether a member should only undertake to work for an animal welfare society (in giving treatment to sick and injured animals of the poor) provided that the society arranged for qualified veterinary treatment at all its clinics, but will consider individual cases, preferably submitted through the medium of, and with the approval of, the N.V.M.A.

The Home Appointments Committee report recorded a further meeting between representatives of the Association and the Permanent Secretary and the Senior Officials of the Ministry of Agriculture, to present new evidence pertaining to the salaries issue. The Association has in preparation a memorandum for presentation to the Chorley Committee, appointed to consider salary scales appropriate to senior members of administrative, scientific and technical staffs of the Civil Service.

Enquiry is to be made of the Agricultural Research Council as to whether they have adopted a scale of salaries for the employment of veterinary graduates, and asking for particulars. The Association of Veterinary Teachers and Research Workers are to be informed of the terms of the reply.

A sub-committee has been appointed to make recommendations regarding the remuneration of veterinary surgeons employed by animal welfare societies in both full-time and part-time capacities.

The promised early issue of the report of the East African Salaries Commission, before which it has laid evidence, will be welcomed by the Overseas Services Committee, which has under review a "Brochure for the Guidance of Recruits" compiled by the Veterinary Association of Eastern Africa.

Enquiry is to be made as to whether any action is being taken to give effect to the Association's recommendation for re-inforcing the post of veterinary adviser, while a written reply is being pressed for to the request for a clear-cut statement of Colonial Office policy in relation to the Unified Colonial Veterinary Service.

The Technical Development and Agricultural Programme Committees presented valuable reports which should be studied in detail on their publication in full, while it is clear that the Provisional Committee for the Southport Congress is well on top of its task.

Council warmly endorsed the unanimous recommendation of the General Purposes and Finance Committee that Dr. C. S. M. Hopkirk, Veterinary Adviser to the High Commissioner for New Zealand, be elected an Associate member of the N.V.M.A.

This summary should not, perhaps, be concluded without mention of the references made, in discussion of the report of this Committee, to the increasing number and scope (one speaker used the term "vagueness") of the financial commitments of the Association. It was emphasised with warm endorsement by the Treasurer, that despite the recent doubling of the subscription, the Association, in common with the whole community, must anticipate a period of financial stringency.

QUESTIONS IN PARLIAMENT

Veterinary Surgeons

Mr. Elliot asked the Minister of Agriculture how many veterinary surgeons were recruited into the Animal Health Division of the Ministry of Agriculture and Fisheries during 1947.

Mr. T. Williams: Nine newly appointed veterinary surgeons took up duty in a temporary capacity in the Animal Health Division of the Ministry during 1947. A further 16 were recruited into permanent appointments as a result of the competition held in the autumn of 1947, although they did not actually take up duty until early in 1948. Seventy-two officers already serving in the Ministry in a temporary capacity during 1947, including four of the nine previously mentioned, obtained permanent appointments from the same competition.

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Salaries, East Africa

Mr. Hurd asked the Secretary of State for the Colonies if he has now received the report of the Committee reviewing Colonial Service salaries in East Africa; and whether he will make a statement.

Mr. McNeil: My right hon. Friend has just received the report in question, but he is not yet able to make any statement in the matter.

Mr. Hurd: Is the right hon. Gentleman likely to reach a decision in the course of the next few weeks?

Mr. McNeil: I understand that printing will take some little time, some few weeks, and after that we might expect a decision.

Poultry (Stock Improvement) Advisory Committee.—When the Minister of Agriculture and Fisheries reappointed the Poultry (Stock Improvement) Advisory Committee under its original terms of reference on March 12th last, it was arranged that an additional member from Wales would be included. Mr. L. A. C. Chamberlin, M.A., of Cantaba Farm, Ruthin, North Wales, has now been appointed to fill that vacancy.

NOTES AND NEWS

Diary of Events

April 28th.—Adjourned Annual General Meeting to be followed by a General Meeting of the Lancashire Division, N.V.M.A., at Manchester (Grand Hotel, Aytoun Street), 2.30 p.m.
April 30th.—Meeting of the Yorkshire Division, N.V.M.A., at York (Royal Station Hotel), 2.30 p.m.
April 30th.—Meeting of the Yorkshire Division, N.V.M.A., at York (Royal Station Hotel), 2.30 p.m.
May 4th.—Animal Management Examination commences at London.
May 4th.—R.C.V.S. Nominations to Council (last date).
May 6th.—Annual Meeting of the Central Veterinary Society, Royal Veterinary College, N.W, 2 p.m.
May 10th.—Entries due for D.V.S. Examination.
May 10th.—First of the Animal Health Trust 1948 Fison Lectures, by Dr. L. Seekles, University of Utrecht, at Kingsway Hall, W.C.2, 2.30 p.m. (See Notice).
May 12th.—Second and third (concluding) A.T.H. 1948 Fison Lectures, by Dr. L. Seekles. (See Notice).
May 12th.—Meeting of the Editorial Committee, N.V.M.A., at 36, Gordon Square, W.C.1, 2.30 p.m.
May 14th.—R.C.V.S. Voting Papers issued.
May 18th.—R.C.V.S. Pharmacology, etc., Examination (revised syllabus).
May 25th.—R.C.V.S. Voting Papers to be returned.
May 27th.—Annual Meeting of the Society of Veterinary Practitioners, at the Holborn Restaurant, W.C.2, 2.30 p.m.
June 1st.—R.C.V.S. Annual General Meeting.
June 1st.—V.V.B.F. Annual General Meeting.
June 7th-8th.—R.C.V.S. D.V.S.M. Written Examination.
June 24th-25th.—R.C.V.S. Membership Written Examinations.
Sept. 8th to 15th (inclusive).—N.V.M.A. Congress at Southport.

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THE VETERINARY SURGEONS BILL

Second Reading in the Lords

On Tuesday last, the second reading of the Veterinary Surgeons Bill was moved in the House of Lords by the Earl of Huntingdon, Parliamentary Secretary to the Ministry of Agriculture. Second reading was duly accorded and the measure will now go to Committee.

Pending full reproduction of the proceedings in our next issue, we may, writing as we go to press, summarise them as follows.

The Earl of Huntingdon said that the country needed a great many more veterinary surgeons. Only about 150 were being turned out each year. Examinations were conducted by the Royal College of Veterinary Surgeons, and this was the only avenue into the profession. In addition, a large number of unqualified men practised.

Except for one or two minor points, the Bill was generally agreed by the veterinary profession, the universities, and the interested bodies. Clause 1 allowed the Privy Council, after consultation with the Royal College of Veterinary Surgeons, to direct that a veterinary degree, given by a specific university, should entitle the holder to be put on the register of veterinary surgeons and become a member of the Royal College. They hoped that the veterinary colleges of London and Edinburgh would enter into the respective universities, and that new schools would be founded in the universities of Bristol, Cambridge, and Glasgow. The output of the universities would be about 220 graduates a year.

A difficult and contentious point was dealt with in provisions relating to unqualified practitioners, many of whom were giving very satisfactory service in various ways. The Bill proposed that unqualified practice should be prohibited except in regard to certain treatments and minor operations for the relief of pain, first-aid, and treatments by owners of animals and by members of the agricultural industry.

Special provision was made for those who were likely to lose their livelihood as a result and the Royal College had been asked to establish a supplementary register for the registration of existing practitioners who were over 28, of good character, and had practised for seven of the past ten years. They would be known as veterinary practitioners. The title of veterinary surgeon would be reserved exclusively for members of the Royal College.

Earl De La Warr, the first speaker from the Conservative benches, welcomed the Bill and said that he agreed with Lord Huntingdon when he said that it was not a political measure. Lord De La Warr emphasised the necessity for the provision of more money and facilities for veterinary education, but he expressed surprise that the title "Veterinary Practitioner" should be given to unqualified persons.

The next speaker was Lord Bledisloe who welcomed the Bill not only on behalf of agriculture, but on behalf of the veterinary profession and on behalf of the public as consumers. He emphasised the necessity for veterinary education to have full Faculty status of its own, and pointed out that there were one or two matters in the Bill which required further elucidation, such as the use of the word "minor" in Clause 5 giving the Minister power to make an order to specify any minor treatment, test or minor operation as being outside the restriction of practice of veterinary surgery by unqualified persons. Lord Bledisloe made specific reference to the importance of the empire of this country as a centre of veterinary training.

Lord Bledisloe was followed by Lord Lucas (Labour) who gave the Bill a very hearty welcome, and, like the previous speakers, emphasised its importance from the consumer's point of view. Lord Harlech, supporting the measure "from every aspect," stressed the necessity for Faculty status for veterinary education, he being followed by Lord Amwell (Labour) who spoke of the measure as representing a very reasonable compromise between all interests affected: he hoped it would enable all such interests to work in harmony for the good of the veterinary profession.

The Earl of Huntingdon, in reply, welcomed the statements made by various speakers.

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R.C.V.S. Council Election, 1948

Addresses of candidates for election to Council R.C.V.S. will in future, in accordance with the view of that body which is endorsed by the Editorial Committee, be published in the supplement to *The Veterinary Record*. The latest date for the receipt of addresses in connection with this year's election is *Monday, May 3rd*; as in previous years, such addresses must be limited to 250 words.

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Southport Congress

In view of unforeseen difficulties, the Executive Committee of the Provisional Committee has decided not to proceed with the proposed paper on "Canine Leptospirosis" at the present juncture. The Committee has expressed appreciation to those concerned for their ready co-operation in this matter.

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B.M.A. AND THE HEALTH SERVICE

A Further Plebiscite

The council of the British Medical Association decided at an emergency meeting in London on Wednesday of last week, on an immediate new plebiscite on the question of participation in the new health service, which most doctors rejected on the first vote.

At the meeting the Council had before it the written answers of Mr. Bevan to the questions which the B.M.A. sent to him, seeking fresh information on several points, including the possibility of direction, basic salaries, and the buying and selling of practices.

Immediately after the meeting of Council the B.M.A. issued the following statement:

"At a meeting this afternoon the Council of the B.M.A. considered the Minister's statement in Parliament and the replies to the questions submitted to him by the B.M.A. on Monday. The Council decided to submit to the profession a full statement incorporating the Association's questions and the Minister's replies, together with the Council's own comments. Every member of the profession is being asked to express his views through a plebiscite which will be held forthwith."

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PERSONAL

Marriages.—Greenough—Barlow.—On April 3rd, 1948, at Frenchay Parish Church, Bristol, Paul R. Greenough, M.R.C.V.S., to Pauline, daughter of Mr. and Mrs. L. C. A. Barlow, Penylan, Overndale Road, Downend, Bristol.

Cruickshanks—Fielding.—On April 2nd, 1948, at St. Silas' Church, Blackburn, Lancs., John Cruickshanks, B.SC., M.R.C.V.S., to Joyce Lawson Fielding. Mr. D. I. Nisbet, B.SC., M.R.C.V.S., was best man.

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Births.—Brown—On April 15th, 1948, to Pauline M. Brown (née White) M.R.C.V.S., wife of Kenneth Brown, M.R.C.V.S., Abinglon, Berks.—a son, David John.

Dunn—On April 11th, 1948, at St. Andrews, Port Isaac, to Evelyn Frances, wife of J. Drummond Dunn, M.R.C.V.S., Wadebridge, Cornwall, a son—Gavin Stuart.

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UNIVERSITY OF LONDON EXAMINATIONS IN VETERINARY SCIENCE

Following is the Pass List of the March, 1948, examination for the University of London B.Sc. (Veterinary Science): Cross, Barry Albert; Darcel, Colin le Quesne; Warren, Alan George, all of the Royal Veterinary College. Passed in Part I only: Pay, Thomas William Ferran (Royal Veterinary College).

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Principal A. A. Forsyth, M.R.C.V.S., D.V.S.M., will deal with "Veterinary Surgery," at 7 p.m. on Tuesday, May 25th, in the series of "Careers Meetings" being held by Glasgow Careers Council for Secondary Scholars, in the Hall of the High School of Glasgow, Holland Street, Glasgow, C.2. Sir Alexander Macgregor, Chairman, Western Regional Hospital Board, will be in the chair.

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ADDRESSES OF DISEASE-INFECTED PREMISES

The list given below indicates, first, the county in which are situated the premises on which disease has been confirmed, followed by the postal address and date of outbreak.

Swine Fever:

Lincs. (*Lindsey*).—8, Fairfax Street, Lincoln (April 16th).

Northumberland.—West Cemetery Allotments, North Shields, Northumberland (April 16th).

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Diseases that Affect Meat Production

Dr. Wooldridge on Necessity for Co-operative Control Measures

In a lecture delivered under the auspices of the Institute of Meat, in the City Livery Club, Sion College, on March 15th, Dr. W. R. Wooldridge, M.SC., M.R.C.V.S., Scientific Director of the Animal Health Trust, said that estimates of disease losses among farm stock showed that the annual loss of meat from this source was greater than the quantity needed to provide full meat rations for 3,000,000 people; the real loss, however, was certainly not less than double that amount, while in addition, there was a loss of at least 1,500 tons of liver from fluke infestation alone and of more than 37,500 tons of poultry meat from disease.

Dr. Wooldridge spoke of disease as being one of the greatest liabilities of the meat producer, for it not only seriously affected its quality, but reduced the potential quantity of meat that could be produced: almost invariably it prevented an animal from putting on weight rapidly and so increased the cost of meat production. A third effect was that the knowledge of the existence of disease in the meat-producing animals, particularly in those countries where an efficient system of meat inspection was not in vogue, tended to reduce the consumer demand for it, particularly so when the disease was of a type communicable to man. Clearly, then, it was to the advantage of all interested in meat—producer, purveyor and consumer—that diseases be eradicated if possible from our meat-producing livestock.

These diseases might be broadly separated into those which reduced the potential number of livestock, those which affected the young, and those which affected the adult animal.

In the first category must be included the many causes of infertility which prevented birth, as well as the highly infectious and catastrophic diseases which rapidly spread throughout herds or flocks, and resulted in the death or slaughter of a high proportion of the animals.

Toll of Infertility.—The total loss of calves owing to sterility cost the nation more than £630,000 per annum. Reckoned in terms of veal and taking a low average weight of 60 lb. per calf, the total weight of meat lost was 15,150,000 lb. Expressed in terms of the present day (1947) ration of 1s. 2d. per week, or 61s. a year, infertility of cattle resulted in the loss of veal which would more than meet the official yearly allowance for 210,000 people.

Abortion.—Contagious and other forms of abortion also materially reduced the number of calves born. It was estimated by the National Veterinary Medical Association that 320,000 dairy cows aborted annually at a cost to the nation, due solely to the loss of calves, of £800,000. This was equal to more than 266,000 annual rations lost. Thus, infertility and the various forms of abortion in our beef and dairy herds to-day were responsible for the under-production of calves to an extent which would have provided the consumer with veal equivalent to more than 476,000 full yearly rations of meat.

Infertility was not so prevalent, so far as was known, in our sheep flocks, but according to the estimate of the National Veterinary Medical Association enzootic abortion in sheep alone costs the nation £110,600, or more than 36,800 yearly rations of lamb. The best estimate of the extent of infertility in swine was about 30 per cent. and the number of stillborn about 5 per cent.; hence considerable loss of pig meat must result from these ailments, although no reliable estimate was available. It was, however, estimated in 1942 that the annual loss from swine abortion in the United States cost that country 10,000,000 dollars.

Notifiable Diseases.—Other diseases which caused considerable loss of meat were the notifiable diseases, such as cattle plague, foot-and-mouth disease and swine fever, which result in the loss of mature animals, either by death or by slaughter.

Cattle plague was one of several diseases which decimated infected herds and which had, fortunately, been eradicated from this country. It was still present in Eastern Europe, on the continent of Africa, and in Asia, and it had a high mortality rate. A short while ago Sir John Boyd Orr stated that if cattle plague could be eradicated from the world, this alone would result in an increased production of meat which would ensure an adequate world-wide supply.

The extent of the losses arising in Great Britain from foot-and-mouth disease varied from year to year, but in 1937, a reasonably average year, 31,586 cattle were slaughtered. In 1937, the number of pigs slaughtered because of swine fever was 2,033, while the recent outbreak of fowl pest resulted in the slaughter of over 200,000 poultry, and probably the death or private slaughter of at least an equal number. He would make no estimate of the meat loss from these diseases, but it must be considerable in Great Britain even to-day.

Diseases of the Young.—Diseases of young stock took a heavy toll in all our breeds of animals; relatively little was known about them, and this was one of the lines of investigation which The Animal Health Trust hoped actively to foster at its new Research Stations.

From the source previously quoted came the estimate that one calf out of every 18 born—excluding stillbirths and abortions—failed to reach maturity. Having specified the major diseases responsible, Dr. Wooldridge said that that meant a loss of over 500,000 calves, of £1,250,000 (at 50s. a calf) and the equivalent of about 433,000 annual meat rations, as veal.

In the recent survey of sheep diseases made by the N.V.M.A., the following estimate was made of annual losses from various lamb diseases: pulpy kidney disease, £208,700; entero-toxaemia,

£110,600; louping ill, £38,000; joint-ill, £25,400; braxy, £208,000, and swayback, £10,900. If the loss of £93,000 arising from enzootic abortion was included, the total loss caused by diseases in lambs was £506,600 a year, and was equal to over 168,000 annual rations of meat, as lamb.

The heaviest losses with pigs occurred in the rearing period and, as with calves (recent research into the most important disease of lambs, lamb dysentery, had yielded an effective method of prevention) much further investigation was needed into the causes of these losses before the diseases concerned could be brought effectively under control. In 1937-38 (when there was 450,000 sows), 1,800,000 "suckers" and 900,000 weaned pigs died, resulting in a monetary loss of £5,400,000, equal to 1,800,000 annual meat rations, as pork or bacon. This loss, of course, was less to-day with our smaller pig herd.

Thus, diseases among young stock generally, resulted in a total annual loss of meat rations for more than 2,000,000 persons.

Diseases of Mature Animals.—Meat condemned from tuberculosis had been said to be worth £300,000 per annum (equivalent to 100,000 annual meat rations). This was clearly an underestimate, for a Government Committee in considering the effect of tuberculosis on the nation's herd of cattle and taking into account both the loss of meat and the need for replacing affected animals, put the monetary annual loss at £3,000,000.

Tuberculosis was less prevalent in beef herds than in dairy stock and the greatest source of loss amongst the former was probably parasitic diseases. It was not possible to give an accurate estimate of the extent of this loss. Warble fly, however, in 1943, affected 43 per cent. of the ox hides and 24 per cent. of the cow hides, resulting in a financial loss of hides valued at £750,000. The carcases or "licked beef" from warbled animals too often needed considerable trimming before they could be saleable as meat. Liver fluke also could cause considerable loss in adult beef cattle, as well as in calves. An extensive abattoir survey showed that 17·7 per cent. of cattle were affected and that 14·6 per cent. of these were steers. It was estimated that there was a loss to the meat industry of 1,500 tons of liver per annum, which, at 1s. 2d. per lb. meant a loss of nearly £200,000.

Another major loss with beef cattle arose from various metabolic and feeding troubles (specified by the lecturer). Most of these ailments appeared to arise from errors in feeding and many would seem to be connected with the management of pastures and the feeding of dried grass. This whole group of diseases needed much more intensive research and would form an important part of the work at the Trust's Cattle Research Station. Diseases of the dairy herd, also, must result in considerable loss of beef.

Losses arising from diseases in adult sheep amounted to £503,000—equal to 167,000 annual meat rations as mutton.

Assuming the number of annual meat rations lost from disease in adult pigs to be due solely to swine fever and swine erysipelas would certainly be to underestimate the true loss; nevertheless, this gave the figure of more than 6,100 annual rations of pork.

Disease in Poultry.—It was safe to say that in no other branch of agriculture had disease taken such a high toll as in poultry farming. The wastage from disease was so great pre-war that in 1936 a Commission was set up to investigate the problem. This Committee estimated that in an industry with an annual value of £30,000,000, the loss from disease was in the region of £4,000,000.

Figures available from egg laying trials, and taken over a 12-year period, showed that the mortality of these trials approximated to 20 per cent. That is, of specially selected birds well managed under control conditions, one in every five died before the end of its first laying year. This figure was probably lower than that occurring throughout the general flocks of the country. Economists reported that in surveys carried out in various parts of England and Wales, of every 100 eggs set less than 30 per cent. reached maturity.

At the present time, the adult poultry stock in England and Wales was estimated to be 22,000,000, of a value of £5,000,000. The mortality of egg laying trials since the War, although less than formerly, was still about 15 per cent. Using this as a guide to mortality throughout the country the loss in adult birds was, therefore, about 7,000,000. Taking the average weight of a carcase at 4 lb. meant that there had been a wastage of 12,500 tons of flesh. Of a total output of 4,000,000,000 eggs, there was a potential loss from disease in egg production of 500,000,000 or the rations at present day standard for at least 10,000,000 people. The losses would be more than three times as great if the number of poultry was as large as pre-war. Thus, normally the country lost annually from disease in poultry at least 37,500 tons of poultry flesh and 1,500,000,000 eggs.

The causes of this wastage could be roughly divided into diseases of chicks and diseases of adult stock. Undoubtedly, the most serious losses in chick-rearing were due to infections caused by organisms of the Salmonella group. In a recent survey it was shown that 30 per cent. of the chicks examined at the Ministry of Agriculture's laboratory over a 12-year period were affected with bacillary white diarrhoea. It was difficult to put the losses caused by this disease at an exact figure, but at commercial hatcheries alone it must be many thousands of pounds a year. Coccidiosis, nutritional deficiences, and mis-management accounted for the greater bulk of the losses in rearing. The overall losses in chick diseases probably amounted to at least £1,000,000 a year.

In adult stock undoubtedly the most serious economic disease was fowl paralysis. This condition occurred in at least 30 per cent. of the specimens received at laboratories for examination, and probably caused an economic loss in the region of £1,000,000 per annum. Having spoken of other serious infectious conditions which can completely decimate poultry flocks, Dr. Wooldridge said that during 1947, this country experienced a severe outbreak of fowl pest. More than 1,000 outbreaks were diagnosed and the official figure for the number of birds slaughtered was over 200,000 and the compensation paid approximately £200,000. At least an equal number of birds died, so that nearly 2,000 tons of poultry meat were lost and the potential loss in egg yield was placed at 12,000,000 eggs—a heavy price to pay for the Ministry of Food's decision to import infected poultry carcases from abroad.

Consumer's Angle.—The consumer naturally was worried at the amount of disease in meat producing flocks and herds, but his anxiety was increased still further when he realised that there were several diseases, such as tuberculosis, undulant fever, salmonellosis, and trichinosis which could be transmitted to human beings direct from animals. The risk of human disease from meat was very largely prevented by proper cooking, but even then infections might be passed on to those who handled the raw meat. It was, therefore, highly desirable that an efficient system of meat inspection and control should be established. In this country, there was still much room for improvement before our meat inspection service was equal to that prevailing in many other advanced countries.

"Clearly much loss is omitted from the estimates I have given," added Dr. Wooldridge, "but even so I have indicated that there is an annual loss of meat in excess of that required to provide full meat rations for 3,000,000 people. The total loss is certainly not less than double this, namely full rations for more than 6,000,000 persons each year. In addition there is a loss of at least 1,500 tons of liver from fluke infestation alone, and more than 37,500 tons of poultry meat from disease. Can we afford to neglect to take steps to reduce these losses in our present drive to feed ourselves?

Future Action.—"From what I have said it is more than evident that the loss arising from disease in our meat-producing animals is serious. I have indicated that certain of these diseases can be controlled if the farmer and the veterinary surgeon co-operate more effectively. Regular veterinary advice and attention to beef and swine herds and sheep and poultry flocks would give excellent results even to-day. A point of importance which would result from this campaign would be the culling of animals that are inefficient producers because of disease. In this way the limited supplies of fodder at present available would be much more efficiently used. It becomes even more necessary to develop this campaign as the plan to increase beef cattle, pigs and poultry to pre-war numbers gets under way. It is said that the veterinary man-power position precludes this, but in actual fact, apart from the shortage of veterinary surgeons within the Animal Health Division of the Ministry of Agriculture—a shortage due to reasons which could soon be remedied by the authorities if they wished—it is thought by many of the profession that there are sufficient veterinary surgeons in the country to justify the commencement of an extensive disease control plan. As the campaign develops, so will more and more veterinary surgeons become available.

"Another important deficiency is that at present there is insufficient research being conducted into the diseases of meat-producing farm livestock. Much more research requires to be done, and in this important task I hope The Animal Health Trust, although an independent body relying upon voluntary funds, will be able to assist, as its group of research stations develops.

"Finally, a nationally co-ordinated abattoir service with meat inspection carried out under adequate veterinary supervision would secure great benefits to producer, purveyor and consumer, and would also provide invaluable information to those who are striving to bring about the control of disease upon the farm."

CORRESPONDENCE

The views expressed in letters addressed to the Editor represent the personal opinions of the writer only and their publication does not imply endorsement by the N.V.M.A.

Jewish and Mohammedan Methods of Slaughter

THE NEED FOR REFORM

Sir,—This is not intended as an appeal to sentiment. It is an appeal to reason, presented with little comment and based upon the cold logic of incontrovertible facts. Its object is to bring home a knowledge of the cruelties involved in the slaughter of cattle for food by the Jewish and Mohammedan methods—cruelties which are perpetrated daily on hundreds of helpless beasts on the specious plea of religious necessity.

The Jewish method of slaughter requires free bleeding of the carcase. In order that this may be accomplished, the throat and its principal blood vessels are completely severed by means of a sharp knife and the animal is allowed to bleed to death while fully conscious. Normally the operation of slaughtering takes place in three stages, as follows:

As a preliminary to the cutting of the throat, the animal is "cast" or thrown to the ground, an operation which, as at present carried out, cannot be said to be essential. To effect this, the bullock, often strongly resisting and terrified, is dragged by means of a chain to a wall of the slaughterhouse. Here its head is drawn down to a ring near the floor. Chains are then fixed to its legs and are attached to a tackle passing through a pulley high in the wall. Slaughterhouse workers, by straining at the tackle, exert a powerful pull on the leg chains, until the beast, unable to retain its balance, falls heavily to the floor. The whole operation is usually one of not inconsiderable violence. The flesh of the animal is not infrequently bruised by the fall, and occasionally bones are broken. The process usually takes some minutes and is undoubtedly painful, while the terror of the animal in its futile struggle can well be imagined.

Following the "casting" comes the next step of forcing the head of the bullock into position for the complete exposure of the throat to the slaughterer's knife. The beast, still fully conscious, lies in a twisted posture, its legs chafed and strained by the chains, drawn high above its body to the pulley in the wall. A chain or rope is then passed through the mouth and round the lower jaw, forming a loop. An assistant then passes a crowbar through this loop, and, using the floor as a fulcrum, gradually forces the head round until the throat is turned upward. In exerting this turning movement the full strength of the beast's powerful neck muscles has to be overcome. The task resolves itself into a pitiful struggle between man and brute and is often of some duration. There can be no doubt whatever that in this stage of the process, the animal suffers both physically and mentally.

When the foregoing preliminaries have been completed—under the most favourable conditions they usually occupy some minutes—the Shochet, or official slaughterman, advances to give the death cut. With a sweeping movement of a very sharp knife, he severs the chief blood vessels of the neck and also the trachea. Profuse bleeding ensues, as a result of which the animal dies after a varying but usually short period of consciousness. The extent of this period of consciousness has been the subject of detailed and careful observation. The late Sir Michael Foster, F.R.S., and the late Professor Starling, F.R.S., in their investigations on behalf of the Admiralty Committee, condemned the preliminary operations of "casting" and "positioning." They speak of a "struggle for life," of "large superficial bruises" and of "an agony of fright." As for the actual slaughtering, they found that animals remain fully conscious after the throat has been cut for periods varying from five to 30 seconds. As a result of the investigations made by these experts, the Admiralty Committee recommended that no Jewish killing should be allowed in any establishment under Government control.

Searching enquiries among Jewish authorities fail to show any religious obligations for carrying on existing methods of slaughter. The Mosaic law enjoined no such formalities. Apparently they are based on certain passages in the Talmud and are merely a matter of ritual custom. This being so, it is surprising to find Jews clinging obstinately to a practice which offends the feelings of their fellow citizens. Cruel customs of Christians have been swept away by enlightened legislation, and in this case, reform is long overdue.

If the preparation of well-bled meat, which is desired by Jews, were found to be impossible by any other means of slaughter, then adverse criticism would be weakened. But this is not so. An analysis made on behalf of the R.S.P.C.A. of the results of exhaustive experiments shows that the bleeding of animals which have been stunned before death is as great as the bleeding of those in which consciousness has been present. Were beasts slaughtered by Jewish methods first stunned by means of humane killers, as is the invariable and compulsory practice in Christian slaughterhouses, no sound objection to the Jewish method could be raised.

Much that is objectionable in their present practice could be removed if Jewish authorities would take advantage of improved methods of casting. Such inventions have been designed and found practicable, but their use has been extremely limited. Notable among such is the Weinberg pen, a mechanical device which enables the bullock to be laid upon its back without struggle. Mattresses, too, have been designed to break the fall. Unfortunately, however, the adoption of such appliances is merely perfunctory. Indeed, it may be said that in spite of years of entreaty, the majority of Jews have remained impervious to change.

The Mohammedan method of slaughter in its essentials resembles the Jewish method and includes the preliminary "casting." In fairness to the Moslems, it is true that many of them have expressed a willingness to use humane instruments in order to render beasts unconscious before the cutting of the throat. Despite this expressed willingness, however, it must be said that very few humane killers are used by Moslem slaughtermen.

Jewish custom allows only meat from forequarters of beasts which after slaughter have been passed in accordance with the Jewish practice and declared "Kosher." The hindquarters from Kosher carcases and all the meat of carcases which are found fit for food under the Public Health Acts but which have been rejected in accordance with Jewish ritual are sold for consumption by Gentiles. The purchaser of such meat is unaware that it was slaughtered in accordance with the Jewish ritual, for it is not marked in any way and no notification of the fact is given to the public.

Gentiles have thus no opportunity of recognising and refusing meat obtained by methods repugnant to their feelings. The provisions of the Slaughter of Animals Act, 1933, permit Gentiles to eat beef without qualms as to the manner of killing. It is an anomaly that, despite this Act, Gentiles should unwittingly eat meat prepared by the cruel methods referred to in this letter.

The Slaughter of Animals Act, 1933, while compelling slaughtermen to use humane methods in the slaughter of animals intended for the food of the majority of the inhabitants of this land, grants complete exemption in the case of those unfortunate animals part of whose flesh is destined for a small minority.

It is now the year of "grace" 1948; the terms of these exemptions urgently need reconsideration.

Yours faithfully,

West Ham, E.15. H. E. BYWATER,
April 14th, 1948. *Chief Veterinary Officer.*

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VETERINARY PRACTICE BY UNQUALIFIED PERSONS

Sir,—It is to be hoped that those members of the profession who read to-day's (April 17th) supplement to *The Veterinary Record* will also study the actual text of the Bill, particularly Clauses 6 and 8. They will then see that unqualified persons admitted to the supplementary register are to be called veterinary practitioners—(and not registered animal practitioners as recommended by the Chancellor Committee).

"Veterinary Practitioner" is not a new description; so far, it has belonged to ourselves alone: now we are asked to hand it over to the miscellaneous assortment listed in the supplement, and comfort ourselves with the exclusive right to the use of the term "Veterinary Surgeon." Can we be satisfied that separation by the use of such closely allied terms will truly represent to the public the (or any) gap between the two classes?

A certain and immediate effect of the passage of the Bill would be that a good name is filched from us and put to base uses, with an unavoidable debasement, too, of the name left to us.

Apart from the uplift accorded to several hundred unqualified persons, other effects are less certain and more remote.

It is possible that the passage of the Bill might close some obvious sources of unqualified practitioners (for ever?), but quackery has many of the attributes of the hydra, including the immortal middle head which will not be smothered or held down by any Act of Parliament.

I suggest that the profession should make an active and determined stand for the exclusion of the word "veterinary" from the title or description of persons to be admitted to the supplementary register. All other points could be conceded.

Yours faithfully,

12, Springfield Place, ESMOND BROWN.
Bath.
April 17th, 1948.

STRAIN 19 VACCINATION AGAINST BOVINE BRUCELLOSIS

Sir,—In his recent paper in *The Veterinary Record*, Dr. T. Dalling made several points concerning Strain 19 vaccination against bovine brucellosis which we feel should be qualified in the light of recent research in this and the Cornell University laboratories, in order that the limitations of the vaccine may be as fully appreciated as its advantages.

With regard to the duration of resistance in cows vaccinated as calves, although one experimental trial, cited by Dr. Dalling, indicates that resistance may persist at a high level into the fourth or fifth pregnancies, there is also experimental evidence of a decline in resistance with time. Birch, Gilman and Stone (*Cornell Vet., 35,* 110, 1945) found a significant fall in immunity in the fourth pregnancy of animals vaccinated as calves, and subjected to natural exposure through each of their subsequent pregnancies.

Similarly in this laboratory (*J. Amer. vet. med. Ass., 110,* 355, 1947) the immunity of 23 animals vaccinated as calves, and of six animals vaccinated as young adults, was challenged in the third pregnancy of the first group, and either the third or fourth gestation period of the second group. Among those vaccinated as calves there were 18 cows which became infected, while all but one of the animals vaccinated as young adults became infected. The incidence of abortions and weak calves was 14 and 3 in the two groups respectively. These results indicate that among the vaccinated animals there was a smaller proportion of resistant animals than would have been expected had the immunity been challenged during the first pregnancy.

With regard to the statement that immunity may be strengthened by exposure to infection shortly after vaccination, the Cornell experiment indicated a fall in resistance with time despite the fact that the animals were exposed most of the time following vaccination.

Yours faithfully,

The University of Wisconsin, College of Agriculture, Department of Veterinary Science. D. T. Berman (*Instructor*).

March 31st, 1948.

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DIAPHRAGMATIC HERNIAE

Sir,—Mr. Knight states in his article in *The Veterinary Record* of April 10th, that rupture of the diaphragm in small animals is rare in this country.

I should like to point out that this condition is not so rare in America (where automobiles are more numerous) as, during my internship of six months at the Angell Memorial Animal Hospital, Boston, Mass., at least a dozen cases were admitted. I was fortunate enough to see several of these cases operated upon by Drs. Blakeley and Munson whom Mr. Knight cites in his references. I was surprised that Mr. Knight made no mention of Dr. Schneider (also of the Angell Memorial Animal Hospital) who first performed this particular operation and to whom I am indebted for a reprint of his article fully reporting this from *The Veterinary Record* of October 13th, 1934.

The American technique is now of a very high standard, the old 'bicycle pump' method of inducing artificial respiration having been superseded by a mechanical piston device.

At the Angell Memorial Animal Hospital tentative diagnosis of a ruptured diaphragm is proved positive or negative by X-ray or fluoroscopy always preceded by a barium meal. A lateral skiagraph is taken with the animal in the standing position to minimise respiratory distress, and the time factor is reduced to one-eighth of a second to cut down motion.

Although the death-rate from anaesthesia in diaphragmatic herniae at the "Angell" is very low. I am unable to give the percentage, but as *The Veterinary Record* is read with keen interest there perhaps Dr. Blakeley or Dr. Munson will let us hear about this.

Yours faithfully,

Ruth McLelland, M.R.C.V.S.

The R.S.P.C.A. Animal War Memorial Dispensary, 10, Cambridge Avenue, Kilburn, N.W.6.

April 12th, 1948.

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"ACUTE INTERSTITIAL PULMONARY EMPHYSEMA OF BOVINES"

Sir,—On reading the account of the outbreaks of acute interstitial pulmonary emphysema of bovines by Messrs. Begg and Whiteford in the issue of March 20th, I was struck by the similarity to the condition found in Wales called "fog fever" or "clwy'r adlodd" in Welsh. The only marked difference is in the mortality: in "fog fever" it is very high—most of the cases I encountered died within 24 to 36 hours.

In treatment I found adrenaline to be useless. The treatment adopted by one practitioner, who claimed good results with it, was to drench the animal very slowly with three drachms of liquor ammon. fort. in one pint of linseed oil, but I have not had an opportunity of trying this out myself.

Yours faithfully,

Southill, Wincanton, Somerset. M. W. Maclean.

March 26th, 1948.

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CONDITIONS OF EMPLOYMENT OF VETERINARY ASSISTANTS

Sir,—Despite your footnote to my letter of February 23rd, the fact remains that the N.V.M.A. did not wish to see adverse criticism published in *The Veterinary Record* at the time of its conflict with the Ministry of Agriculture. If not, why did they seek sanction from Mr. Johnston to delay publication of his letter? How much more refreshing it is to consider the attitude of the B.M.A. in their much more important dispute. In a recent issue of *The British Medical Journal*, the editor points out that a higher proportion of the letters received that were critical of the B.M.A.'s policy in regard to the National Health Service have been published than those supporting it. The B.M.A., too, by means of its very democratic principle of organising plebiscites has been able to obtain strong evidence of the extent of the support given to its policy by *all* its members.

From letters that have recently appeared in *The Veterinary Record*, and from general discussion, I think that many members feel that the N.V.M.A. should state, in some form, a minimum salary for assistants and thus put its own house in order before embarking on such meritorious policies as that of increasing the status of the veterinary staff of the Ministry of Agriculture.

As assistants are very poorly, if at all, represented as such on Council, N.V.M.A., and are frequently unable to attend divisional meetings, their opinions do not reach Council N.V.M.A. in any great strength. Consequently, despite the support given by divisional meetings, Council, N.V.M.A. may still be unaware of the real amount of support given to its policies. To correct this, I would suggest that: (1) Principals of practices give their assistants opportunity, whenever possible, and encouragement to attend divisional meetings.

(2) In some way, assistants be represented, proportional to their strength, on Council N.V.M.A. I would add here that I do not see how any committee can satisfactorily consider salaries and status of assistants unless such a committee contains a representative number of assistants.

(3) Plebiscites be organised on all matters in which the issues are reasonably obvious.

Yours faithfully,

40, Cholmeley Park, Highgate, N.6. H. Williams Smith.

March 20th, 1948.

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R.V.C. ATHLETIC CLUB

Sir,—On behalf of the Athletic Club I should like through the medium of your columns to bring to the notice of past students of this college the advent of Sports Day.

This annual feature is to be held at Streatley on Saturday, May 29th, commencing at 11 a.m.

The sports to be run off in the afternoon on Goring Recreational Ground, include such novel events as a children's race (staff children *versus* students' children) and students' dog race.

Following the prize giving there will be a high tea and dance.

It is anticipated that large numbers of visitors will be wanting to come. Those wishing to do so and wanting reservations for lunch and tea, for which a charge will be made, should communicate with me.

I should like to appeal to those old members who have running shoes for which they have no further use, to send them to me, whereupon they will be put to good service.

Yours faithfully,

Streatley House, Streatley, Berks. J. B. Walsby (*Hon. Secretary*).

April 17th, 1948.